

пацієнтів лікворошунтуюча операція забезпечувала клінічне поліпшення і хворі не потребували видалення НВН. При оцінці функції лицьового нерва за House-Brackmann, після хірургічного лікування, отримано наступний результат: 102 пацієнтів (68,9%) віднесено до grade-I, до grade-II - 25 (16,9%) пацієнтів, 13 випадків (8,2%) віднесено до grade-III, 5 (4%) випадків оцінено на grade-IV, ще по 3 (2%) пацієнти склали групу grade-V та grade-VI. Слух вдалося зберегти у 28 (78%) пацієнтів з 36 у яких він був до операції. Інфекційно-запальних ускладнень не було. В 2-х (1,3%) випадках відмічено підпапоневротичне скопичення ліквору та назальна лікворея, що потребувало проведення хірургічної пластики. В 1-ї (0,6%) пацієнтки післяопераційний період ускладнився ішемічним інсультом в басейні задньо-нижньої мозочкової артерії на контра латеральному боці від хірургічного доступу. Мали місце 2 летальні випадки(1,3%).

**Висновки.** Застосування модифікованих хірургічних доступів, разом з дотриманням принципів мікрохірургії, хірургії основи черепа, використання допоміжного технічного обладнання та проведення інтраопераційного моніторингу, було запорукою задовільних післяопераційних функціональних результатів у пацієнтів з НВН.

## 26. Surgical treatment of caudal cranial nerve schwannomas: own results analysis and literature review

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**Background.** Caudal cranial nerves schwannomas (CCNS) are quite rarely encountered in neurooncology but represent certain difficulties for a surgeon, while treatment outcomes cannot be considered successful.

**The aim of our study.** Analysis of own CCNS case study and modern literature on this matter with subsequent formulation of current approaches to surgical treatment of this type of tumors.

**Methods.** 4 CCNS patients were operated for the last 3 years (2016-2019) in the Neurosurgery Clinic at Mechnikov Hospital (Dnipro, Ukraine). One patient had been previously not quite successfully operated in another clinic (the operation ended with biopsy due to bleeding and evident bradycardia). Subsequent insertion of a ventriculoperitoneal shunt resulted in a short-term effect, which required reoperation in our clinic. All operations were carried out by the first author of the study. Brain MRI (1.5 T

in T1, T2, Flair, DWI, and T1 modes with intravenous enhancement) and helical computed tomography angiography were performed preoperatively for all patients.

**Results.** Two women and two men were operated. The average age was  $41.3 \pm 3.8$ . Two tumors were right-side and two left-side. All patients had headache, vertigo, hearing deficiency, and coordination dysfunction. Two patients had bulbar palsy, horizontal and vertical nystagmus. Retrosigmoid approach was used in all cases. In one case, the surgery was performed with endoscopic assistance. Intraoperative neurophysiological monitoring of cranial nerves function was performed in all patients. Total removal of intracranial part of a tumor was carried out in all cases. A histopathology report confirmed the presence of a benign schwannoma (grade I) in 3 cases and anaplastic schwannoma (grade III) in 1 case. External ventricular drainage was carried out for postoperative acute hydrocephalus treatment in 1 patient. Facial nerve paresis occurred postoperatively in 1 case. 3 patients had temporary bulbar palsy progression, which required nasogastric tube placement. Only one patient had stable bulbar disorders, which required tracheostomy tube placement.

### Conclusion

- 1) Retrosigmoid approach is optimal for removing type A, B1, and B2 tumors and extracranial part of type D tumors.
- 2) Given the CCNS location, even in case of preserved integrity of structures surrounding a tumor, postoperative period involves the risk of postoperative complications (occlusal hydrocephalus) and new neurologic impairment.
- 3) Intraoperative neuromonitoring of cranial nerves function is an important stage of a surgery.
- 4) Using angled endoscopes for assistance allows removing a jugular foramen tumor. It is appropriate to use transcervical approaches to remove an extracranial part of a tumor.

**KEY WORDS:** non-vestibular schwannoma, caudal cranial nerves, glossopharyngeal nerve, neurophysiological monitoring, results, bulbar palsy.

## 27. Combination of surgical approaches (microsurgical and endoscopic endonasal) in surgery of craniofacial tumors

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**Background.** It is appropriate to use minimally-invasive surgical approaches for cranio-facial tumors with intra-extracranial extension since patient survival does not change [Dan M. Fliss; Ziv Gil, 2016]. That allows to decrease number of postoperative complications [Robert M. Kellman; Lawrence Marentette, 2001]. In some cases, when tumor had extracranial lateral extension to the skull base, the question of surgical approach and the radicality of tumor removal remains open.

**Objective:** to improve surgical results and outcomes in patients with craniofacial tumors using combined surgical approaches.

**Methods:** We analyzed 71 patients with anterior fossa floor tumors. Histology : cancer - 30; adenocarcinomas- 9; chondrosarcomas- 2; osteoblastoma-2; esthesioneuroblastoma - 3; neuroblastoma - 3; hemangiopericytoma- 2; osteomas- 6; meningiomas- 6; others— 9 (mts, brain granulomas, cholesteatomas). In 56 cases (79%) extracranial tumors had intracranial extension. Subcranial approach was performed in all 71 cases, in 9 cases of them we performed endoscopic endonasal assistance.